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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,606

12/14/2005

Paul Joern

4084

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MARSHALL & MELHORN, LLC  
FOUR SEAGATE - EIGHTH FLOOR  
TOLEDO, OH 43604

EXAMINER

TOLIN, MICHAEL A

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

11/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/533,606

**Applicant(s)**

JOERN, PAUL

**Examiner**

MICHAEL A. TOLIN

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 4-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to previous claims in the alternative. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Regarding claims 4 and 8-10, multiple dependent claims may only refer to previous claims in the alternative. The “at least one” language in the preamble of each of these claims is not alternative.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is no antecedent basis for the term “the two-dimensional bonded fiber”. In particular, there is no indication that the textile material which is laid two dimensionally in a plane is bonded to form a two dimensional bonded fiber. Similarly, there is no antecedent basis for the “three-dimensional target form”. Since there is no step of forming a two-dimensional bonded fiber, the intended scope is

unclear. Accordingly, the examiner cannot offer a suggested correction. As to the three-dimensional target form, the examiner suggests introducing this terminology at an earlier point in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Evans (US 2004/0021828).

Evans teaches a method for the production of a three-dimensional preform from textile starting material comprising pre-impregnated tape of having unidirectional fibers bonded together by the impregnating resin (prepreg). A CAD system calculates ply orientation and geometry from a three-dimensional target form. The textile starting material is then laid down two dimensionally in a plane, and cut to the required geometry. The claims do not preclude such a cutting step, nor do the claims require laying down the textile materials into any particular orientation or geometry. See Evans (paragraphs 9-11, 28, 32 and 36). Evans clearly teaches the claimed shaping step (paragraphs 37-39).

Regarding claim 2, Evans teaches the claimed compacting step (paragraph 40). It is noted that debulking is a term of art which refers to compacting a layup to reduce bulk and eliminate air pockets.

Regarding claim 3, the prepreg material of Evans contains fibers and thus satisfies claim 3. Alternatively, such prepreg material is considered a tape.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Youngkeit (US 4938824).

In view of the effective date of the Evans reference applied above, the claims are rejected here in the alternative.

Youngkeit lays down fibrous tape in a two dimensional plane wherein geometry (such as length and width) and orientation have clearly been calculated from the desired shape and properties of the three dimensional target form (Figures 5 and 6; columns 7 and 8). In particular, Youngkeit teaches that orientation is determined by engineering principles known in the art (column 8, lines 38-44; column 3, lines 10-11; column 6, lines 57-68; column 7, lines 1-6). One of ordinary skill in the art would appreciate that such engineering principles involve calculations. In any event calculation of fiber orientation to achieve desired strength characteristics in a composite part is considered conventional in the art, for example using CAD software. To the extent that Youngkeit does not inherently suggested the claimed calculations, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the claimed calculations for the motivation of achieving desired strength

Art Unit: 1791

characteristics in accordance with conventional practices in the art. The two dimensional layer is then shaped into a three dimensional form. Youngkeit also teaches the compacting limitation of claim 2

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. TOLIN whose telephone number is (571)272-8633. The examiner can normally be reached on M-F 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Tolin/

Examiner, Art Unit 1791